

### **In the Specification**

Please replace paragraph [0083] with the following:

[0083] **Figure 12A** illustrates a first substrate 52 in accordance with one embodiment of the invention. First substrate 52 is comprised of a rigid material such as glass. First substrate 52 is coupled with an insulating layer 54 deposited thereon. Insulating layer 54 may be comprised of insulating materials such as silicon dioxide ( $\text{SiO}_2$ ) and may have a thickness of 1.0-1.2  $\mu\text{m}$ . Dielectric material 53 is sandwiched between the insulating layer 54 and first substrate 52. **Figure 12B** illustrates a gate electrode layer 56 deposited on the surface of the insulating layer 54. Gate electrode layer 56 may be formed by sputtering, evaporation onto the insulating layer, chemical vapor deposition, or other suitable operation. Gate electrode layer 56 is comprised of conductive materials such as Nb and may have a thickness up to 2,000 Å. **Figure 12C** illustrates a masking material such as conventional photoresist deposited on gate electrode layer 56. Mask 58 is used for designation of areas which are not to be etched. This masking material may form a layer that has a thickness of approximately 2 microns. **Figure 12D** illustrates the same device as in **Figure 12C**, but the masking material is shown to mark designated layers on the gate electrode layer 56. **Figure 12E** illustrates a layer of etchant 60 deposited on top of the masking layer as shown in **Figure 12D**. The etchant used depends on the metallization used. The mask and etch of the device in **Figure 12E** create cavities in the insulating and gate electrode layers. **Figure 12F** illustrates a lift-off layer of material, such as nickel, deposited by an electron beam deposition process, or other suitable methods, over the gate electrode layer 56 to form a sacrificial lift-off layer. **Figure 12G** illustrates a sacrificial layer 59 comprised of some type of photoresist on top of the device shown in **Figure 12F**. **Figure 12H** illustrates a conductive tip material 62 (e.g., molybdenum (Mo)) deposited within each cavity by using a beam of electrons which are normal to the apertures created in the insulating and gate electrode layers. Thereafter, a material such as a variety of acids is used to lift-off the blocks having the emitters and gates from the substrate. **Figure 12I** illustrates a material such as hydrofluoric acid that separates a block with the emitters and gates which creates the device in **Figure 12J**. **Figure 12J** illustrates a block that holds a

plurality of emitters and gates. Although the block shows five emitters and five gates, there may be a greater or lesser amount of emitters and gates created on the blocks. By fabricating a plurality of blocks with emitters and gates thereon, these microelements may be tested to ensure that they are operable before the objects are placed on the substrate (or a flexible layer). **Figure 12K** illustrates a substrate with recessed regions created within the substrate. There are shaped recessed regions of various sizes for the purpose of receiving a variety of objects. **Figure 12L** illustrates blocks having emitters and gates that have slid into the recessed regions of the substrate. These blocks were placed into their respective positions through the FSA process. **Figure 12M** illustrates a spacer that has been placed into a recessed which is slightly larger in diameter than the spacer itself. The spacer also was placed in this position through the FSA process (or through the “pick and place” method if the FSA process does not place the spacer into a recessed region for the spacer). **Figure 12N** illustrates the same device as in **Figure 12M** except that a driver chip has been placed into a recessed region which has a diameter which is slightly larger than the driver chip itself. The driver chip also was placed in this position through the FSA process. **Figure 12O** illustrates a first substrate and a second substrate coupled together. The first substrate forms a portion of the cathode and the second substrate forms a portion of the anode.